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The manufacture of such compressible or slightly spongy forms of silicone is known in the art, for example by introducing foams or bubbles into a silicone polymer during its formation. Thus, the medial conductive portion 240B can be compressed and constrained in channel 270a in the introducer as depicted in FIG. 11A. FIG. 11B depicts the slidable deployment of member 220A wherein its radial expansion is indicated by arrows A. In some embodiments, the deployment of the member 220A and expansion of medial conductive portion 240B may only expand the diameter of the member by a small percentage. However, in small cross-section members 220 that are percutaneously introduced, any increase in the surface area of the engagement plane 225 and surface conductive layer 240A can be very important. In the application of Rf energy to tissue, the effective area of the electrode surface is critical for energy delivery.

FIGS. 12 and 13 illustrate other embodiments of energy delivery members 280 and 290 that have a medial conductive portion 240B that is compressed to provide other advantages. These embodiments, in general, again have a core portion 240C that is coupled an Rf source 150A and further define a surface engagement plane 240A as described above for contacting the targeted tissue tt. As described above, the inventive energy delivery member can be used for any thermally-mediated therapy for any thermal dose and in some cases it may be desirable to apply energy about a surface of a substantially firm organ or anatomic structure 292. In such a case, as illustrated in FIG. 12, it would then be desirable to provide an engagement plane 225 conforms to the surface contours of the anatomic structure 292 that is engaged to thereby provide more effective energy delivery. In FIG. 12, the portion of the energy delivery member shown has an insulator layer 294 about three sides of the member to provide an engagement plane 225 extending along one side of the member. FIG. 13 illustrates another embodiment of energy delivery member 290 that can benefit from a compressible or resilient engagement plane 225. In this embodiment, the engagement plane 225 can again form one surface of a member and cooperates with a clamping member 295 that clamps the targeted tissue tt against the plane 225. In other words, the engagement plane can be carried by either or both elements of a jaw structure. In operation, the resiliency of the medial conductive portion 240B can optimally maintain the engagement plane 225 in suitable engagement with the surface of the targeted tissue as the characteristics of the tissue are changed, for example by dehydration, wherein the engagement plane will expand as the tissue shrinks (see arrows in FIG. 13). When applying a

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thermally-mediated therapy for purposes of coagulation or sealing, the tissue can be expected to dehydrate and shrink to some extent.

In another embodiment, the variably resistive matrix can be a pressure-sensitive resistive material that is carried in an exterior layer or body portion at an exterior of a probe working end. For example, the variably resistive layer can be substantially thin and fabricated of a material called a "pressure variable resistor ink" identified as Product No. CMI 118-44 available from Creative Materials Inc., 141 Middlesex Rd., Tyngsboro, MA 01879. The resistance vs. pressure characteristics of the variably resistive matrix can be adjusted by blending with Product No. CMI 117-34 that is available from the same source. It can be appreciated that the working end of the probe can function somewhat as depicted in FIGS. 12 and 13 wherein increasing pressure against the pressure-sensitive resistive layer can decrease its resistance to enhance Rf application to tissue through the layer. Conversely, the pressure-sensitive resistive layer can be of a type that increases in resistance as pressure is applied thereto. Such a pressure-sensitive resistive material further can be an open cell of a closed cell sponge-type material. In another embodiment, the system can provide a fluid source coupled to the open cell variably resistive material to provide fluid flows thereto as will be described further below.

4. Type "C" probe for tumor ablation. Type "C" probes corresponding to the invention are illustrated in FIGS. 14, 15A & 15B that are adapted for energy delivery to tissue, again described in the treatment of a targeted benign or malignant tumor. FIG. 14 illustrates a Type "C" probe 300 in a sectional view of its working end only that can apply energy to tissue in a manner similar to the Types "A" and "B" embodiments described above. Each energy delivery member 320A-320B defines a surface engagement layer portion 340A, a medial conductive portion 340B of a PTC material and a core conductive portion 340C. In the previously described embodiment of FIG. 8, the multiple energy delivery members 220A-220B operated simultaneously in the same polarity with respect to Rf source 150A and the electrical return. In contrast, the probe 300 of FIG. 14 has two energy delivery members 320A-320B that superficially appear to be identical to the probe of FIG. 8. However, the probe 300 of FIG. 14 operates in a bi-polar fashion so that an Rf energy density is created between the engagement planes 325A-325B of the members 320A-320B by Rf energy flow directly therebetween. In other words, the engagement planes 325A-325B of the members at any point in time would have opposing polarities, as provided by the Rf source 150A and controller 150B. For purposes of explanation, the

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components of the working end and the electrical leads are indicated with positive (+) and negative (-) polarities which correspond to such polarities a particular point in time during energy delivery. In other respects, the energy delivery members 320A-320B of FIG. 14 are adapted to function as described above to modulate energy application to the targeted tissue tt as the thermally sensitive medial layers 340B of each energy delivery member hovers about its selected switching range. It should be appreciated that the exposed conductive surface portions 340A-340B can be recessed in the engagement planes 325A-325B, or partly covered with an insulator elements to prevent the contact (and shorting) between the surfaces if the needle member deflect and inadvertently contact on another.

FIGS. 15A-15B illustrate another embodiment of Type "C" probe 400 in which an elongate length of a single energy delivery member 420 carry at least two spaced apart sections that comprise conductive engagement planes (e.g., 422a-422b) that are independently coupled to Rf source 150A and controller 150B to function with opposing polarities. In this sense, the invention operates somewhat like the bi-polar arrangement of FIG. 14. As can be seen in FIG. 15A, the exemplary probe 400 defines two independent conductive surface engagement portions 422a-422b, but any number of independent active engagement portions are possible. FIG. 15B illustrates a sectional view of the member 420 with one engagement surface 422a having a conductive engagement portion 440A in contact with the medial PTC layer 440B as described previously. The core conductive electrode portion 440C is coupled by insulated lead 445 to Rf source 150A and controller 150B. The assembly defines a particular polarity at a point in time which, for purposes of explanation is represented by positive (+) and negative (-) polarities in FIG. 15B with the engagement surface portion 440A coupled by lead 446 to the Rf source 150A. The second conductive surface engagement portions 422b has its conductive surface engagement portion 440A' adjacent to medial PTC layer indicated at 440B' which in turn is coupled to core conductive portion 440C'. The core electrode 440C' is coupled by insulated lead 455 to Rf source 150A and controller 150B. The engagement surface portion 440A' coupled by lead 456 to Rf source 150A (connection not visible). The portions of the member 420 not comprising an engagement surface are part of an insulative body portion indicated at 464.

Referring back to FIG. 15A, the effect of using the probe 400 is illustrated wherein lines of an electric field ef are indicated in tissue as current flow can be generally directed between the opposing polarities of the spaced apart engagement surfaces. A probe of this type can be used to apply energy to a precise area. A plurality of probes of this